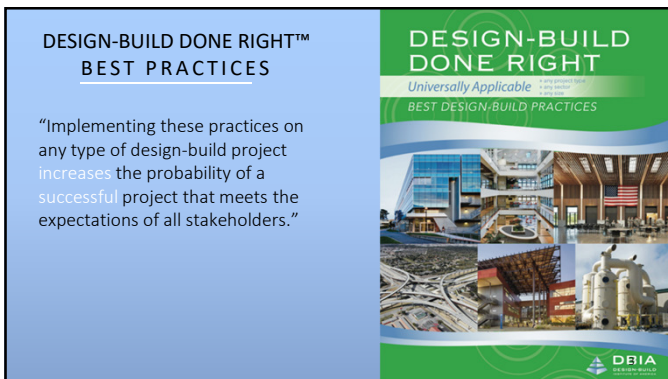


DESIGN BUILD BEST PRACTICES FOR TRANSPORTATION



WHAT IS A BEST PRACTICE

- A **best practice** is the belief that there is a technique, method or process that is more effective at delivering a particular outcome than any other
- With proper process, checks and testing, a desired outcome can be delivered with fewer problems and unforeseen complications

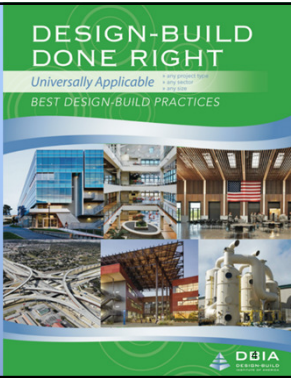


DESIGN-BUILD DONE RIGHT™ BEST PRACTICES

"Implementing these practices on any type of design-build project increases the probability of a successful project that meets the expectations of all stakeholders."

DESIGN-BUILD DONE RIGHT™ BEST PRACTICES

“If these practices are **NOT** implemented, there is an increased probability that the project’s performance will be compromised and that some or all of the stakeholders will be disappointed.”



CHALLENGE OF BEST PRACTICES

- Differing views on what is a “best practice”
 - Eyes of beholder based on experiences
 - Industry sector
- Extensive industry outreach to end confusion



DESIGN-BUILD DONE RIGHT™ SUPPLEMENTAL DESIGN-BUILD BEST PRACTICES



TRANSPORTATION
SECTOR



FEDERAL SECTOR



WATER/WASTEWATER
SECTOR

- Structured around procurement, contracting and execution practices
- Universal and sector specific practices

UNIVERSALLY APPLICABLE BEST DESIGN-BUILD PRACTICES

BEST PRACTICES (BP)

- High level principles
- Organized into Procurement, Contracting and Execution topics
- 10 in total

IMPLEMENTING TECHNIQUES (IT)

- Discrete ways to implement the best practices
- Essentially “mini” best practices
- 59 in total

7

PROCUREMENT BEST PRACTICES #1

“An Owner should conduct a proactive and objective assessment of the unique characteristics of its program/project and its organization before deciding to use design-build.”

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PROCUREMENT IMPLEMENTING TECHNIQUE #1(H)

“Owners should make an early determination of their programmatic position on conflicts-of-interest policy for design-build procurements, *Considering federal, state, and local requirements relating to conflicts, and promptly disclose this policy to the industry that will likely pursue these design build projects.*”

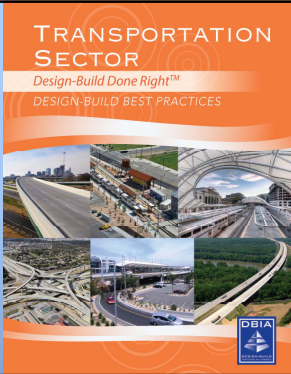
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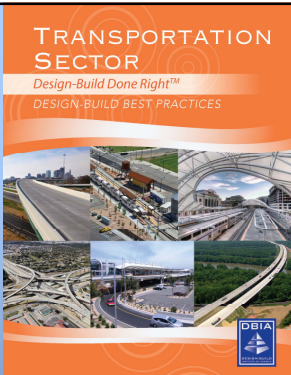
**PROCUREMENT IMPLEMENTING
TECHNIQUE #1(j)**

“Owners should evaluate and identify the appropriate parties to acquire right-of-way (ROW) and relocate utilities as part of the project”



**PROCUREMENT IMPLEMENTING
TECHNIQUE #1(k)**

“Owners should develop ATC guidelines that define the process in which ATC’s are reviewed, evaluated and accepted. This is especially important for Owners with limited staff resources. ”



**PROCUREMENT IMPLEMENTING
TECHNIQUE #1(k cont.)**

“On significantly large and complex projects, these ATC guidelines can help steer the process productively towards the desired areas of innovation and maximize the opportunities for the owner to achieve positive results.”



PROCUREMENT BEST PRACTICES #2

"An Owner should implement a procurement plan that enhances collaboration and other benefits of design-build and is in harmony with the reasons that the Owner chose the design-build delivery system."

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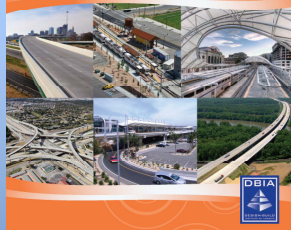


PROCUREMENT IMPLEMENTING TECHNIQUE #2(c)

"Owners should develop their design build procurement with the goal of minimizing the use of prescriptive requirements and maximizing the use of performance based requirements, which allow the design-build team to meet or exceed the owner's needs through innovation and creativity."

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PROCUREMENT IMPLEMENTING TECHNIQUE #2(c)

"If prescriptive requirements are included, owners should take the design to the minimum level required to obtain major approvals required for project development, AND consider other means that encourage design flexibility, such as ATC's or allowing the design to deviate from the preliminary design within specified parameters."

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**PROCUREMENT IMPLEMENTING
TECHNIQUE #2(g)**


“Owners should take appropriate steps to reduce ROW acquisition risk for the project.....

- Identify ROW boundaries
- Dates for ROW acquisition
- Assist with the process
- Clearly specify responsibilities
- Remain responsible for ROW Costs”

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SECTOR**

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**PROCUREMENT IMPLEMENTING
TECHNIQUE #2(h)**

“Owners should take appropriate steps to reduce risks relating to utility relocation.....

- Identify how to best allocate risk
- Establish “allowances”
- Do your homework with utility owners and stakeholders early.
- Clearly define responsibilities
- Get schedule commitments from utilities.

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**PROCUREMENT IMPLEMENTING
TECHNIQUE #2(i)**

“Owners should meet early with any impacted railroad management team to discuss the project and define scope.

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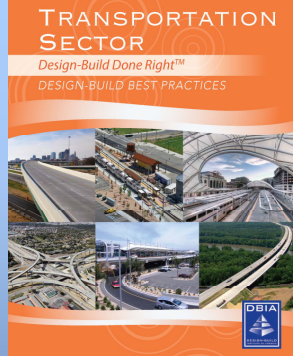
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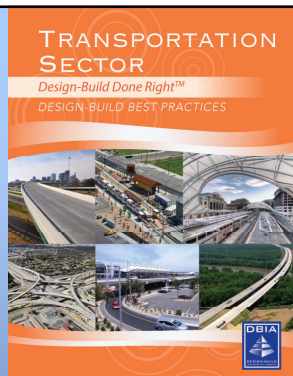
PROCUREMENT IMPLEMENTING TECHNIQUE #2(j)

"Proposers should be encouraged to submit ATC's that do not compromise project quality or intent, and that allow proposers to provide new ideas, innovations, or concepts that may not have been reflected in the RFP."



PROCUREMENT IMPLEMENTING TECHNIQUE #2(k)

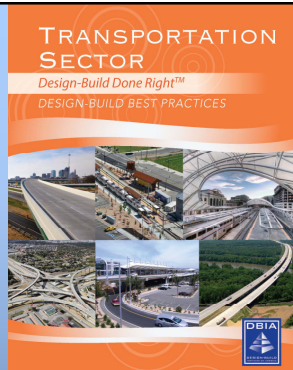
"Owners should perform an adequate search to identify necessary environmental permits in order to avoid potential permit issues with the RFP conceptual design. Implement risk management strategy tied to the permitting process."



PROCUREMENT BEST PRACTICE #3

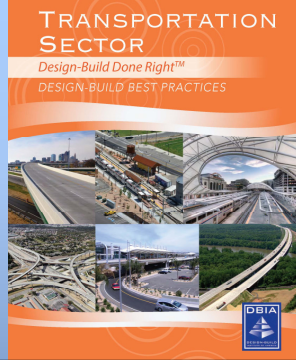
"An Owner using a competitive design-build procurement that seeks price and technical proposals should

- (a) establish clear evaluation and selection processes;
- (b) ensure that the process is fair, open and transparent; and
- (c) value both technical concepts and price in the selection process."



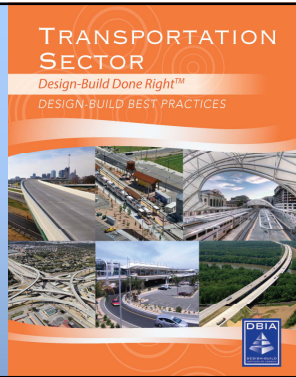
CONTRACTING BEST PRACTICE #1

"Contracts used on design-build projects should be fair, balanced and clear, and should promote the collaborative aspects inherent in the design build process."



CONTRACTING BEST PRACTICE #2

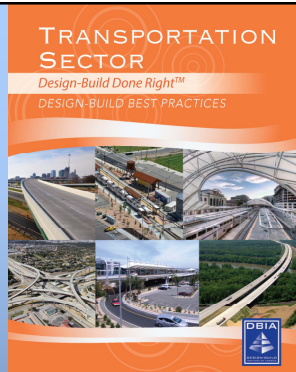
"The contract between the owner and design-builder should address the unique aspects of the design-build process, including expected standards of care for design services"



**CONTRACTING IMPLEMENTING
TECHNIQUE #2(c)**

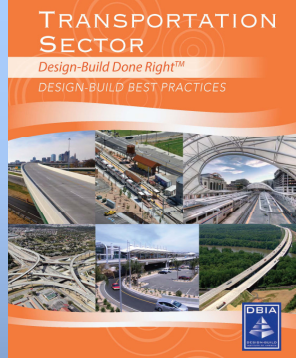
"The contract should clearly specify the owner's role during project execution, particularly relative to:

- a) The process for the design-builder reporting to and communicating/meeting with the owner
- b) The owner's role in acting upon design and other required submittals"
- c) The owner's role, if any, in Quality Assurance/Quality Control.



CONTRACTING IMPLEMENTING TECHNIQUE #2(c cont.)

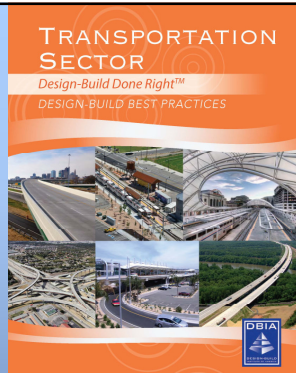
"Additionally, the contract should clearly specify the respective responsibilities of the owner and the design-builder in the areas of design, permitting, ROW, environmental mitigation measures, improvements that will be owned by third parties, and utility relocations."



CONTRACTING IMPLEMENTING TECHNIQUE #2(g)

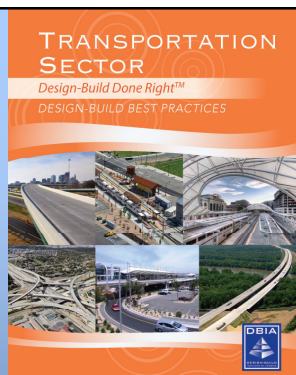
"The contract should clearly define the rules of engagement with stakeholders that will be involved in the design or construction:

- Third party ownership
- Utility relocations
- ROW acquisitions
- Other contractors"



CONTRACTING IMPLEMENTING TECHNIQUE #2(h)

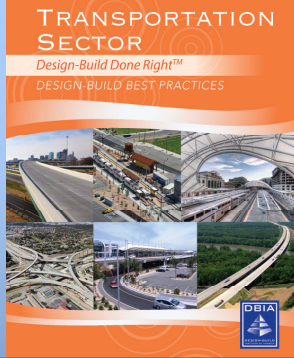
"The contract language should address risk allocation when unexpected conditions (including subsurface conditions, utilities, and hazardous materials) are encountered"



CONTRACTING IMPLEMENTING TECHNIQUE #2(i)

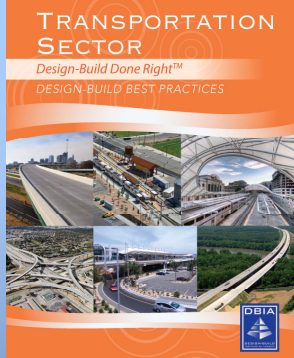
"The contract should clearly establish which party has responsibility for risks associated with:

- Governmental approvals (Permits)
- Changes to existing NEPA documents, including and NEPA re-evaluation
- Changes in laws and standards



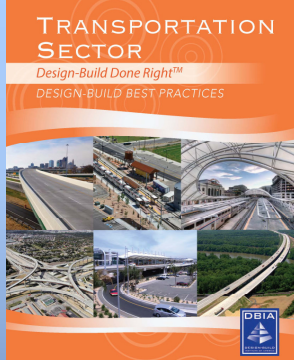
CONTRACTING BEST PRACTICE #3

"The contract between the design-builder and its team members should address the unique aspects of the design-build process."



EXECUTING BEST PRACTICE #1

"All design-build team members should be educated and trained in the design-build process, and be knowledgeable of the differences between design-build and other delivery methods."




EXECUTING IMPLEMENTING TECHNIQUE #1(b)

“Projects should be staffed with individuals that are educated and experienced in the implementation of design-build best practices, and whose personalities are well-suited to the collaborative nature of the design-build process. The key personnel and subcontractors proposed by the design-builder during the qualifications stage are critical to delivering a successful project; therefore, the individual and team members should not be changed during the contract period”

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EXECUTING IMPLEMENTING TECHNIQUE #1(e)

“Design-builders should be familiar with the entire NEPA process and its requirements, as this can be a critical factor if the design-builder proposes changes to approved concepts that deviate from the approved NEPA documents”

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EXECUTING BEST PRACTICE #2

“The project delivery team should establish logistics and infrastructure to support integrated project delivery”

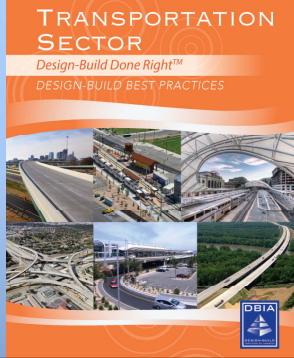
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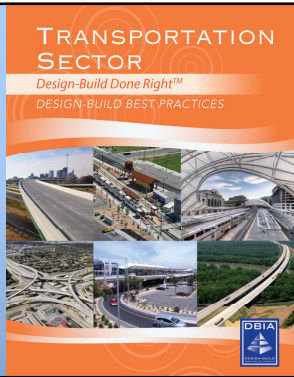
EXECUTING IMPLEMENTING TECHNIQUE #2(a)

“Owners and the appropriate members of the design-builder’s team should co-locate when justified by project characteristics (e.g. project’s complexity and volume of design submittals.) This is especially appropriate for large projects and should also consider including third party agencies such as permitting agencies and/or FHWA/FTA.



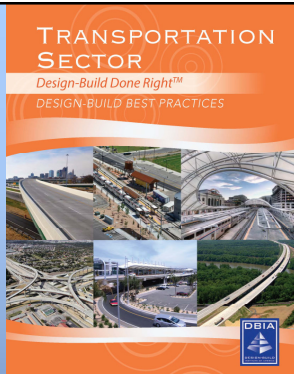
EXECUTING BEST PRACTICE #3

“The project team, at the outset of the project, should establish processes to facilitate timely and effective communication, collaboration, and issue resolution”



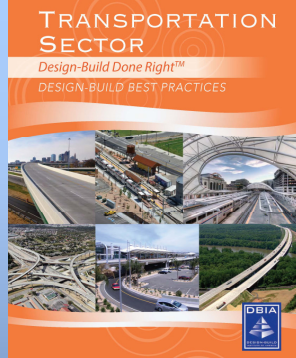
EXECUTING IMPLEMENTING TECHNIQUE #3(c)

“The owner and the design-builder should develop processes that enable key stakeholders (e.g. government agencies, utility and property owners, and third party operators) to interface directly with the design-builder and its design professionals on significant elements of work. Among the processes that might be considered are the use of special task forces to address issues related to ROW acquisition, utility relocation, and environmental permitting that will engage key stakeholders into the process.



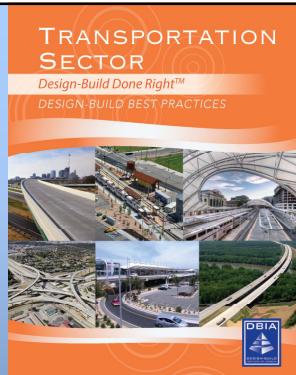
EXECUTING IMPLEMENTING TECHNIQUE #3(g)

"All parties involved with environmental compliance should attend project coordination meetings during the design and construction phases.



EXECUTING IMPLEMENTING TECHNIQUE #3(h)

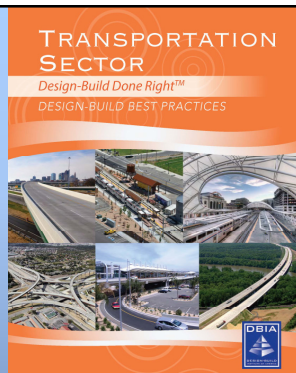
"Design-builders should gain an understanding of the owner's goals and should be aware that compliance with environmental mitigation requirements and other legal requirements (e.g. affirmative action, DBE, etc.) are often critical components to the owner even though they may not affect the ultimate work product.



EXECUTING IMPLEMENTING TECHNIQUE #3(i)

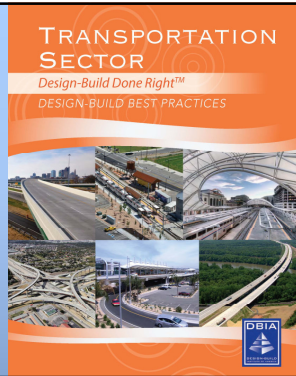
"The design-builder should identify early action items that will reduce the potential for future delays, including:

- Challenging ROW issues
- Long lead items
- Expediting Geotech and utility investigations
- Developing relationships with utility owners and other key stakeholders



EXECUTING BEST PRACTICE #4

"The project team should focus on the design management and commissioning/turnover processes and ensure that there is alignment among the team as to how to execute these processes."



CERTIFICATION REQUIREMENTS

PROFESSIONAL CERTIFICATIONS

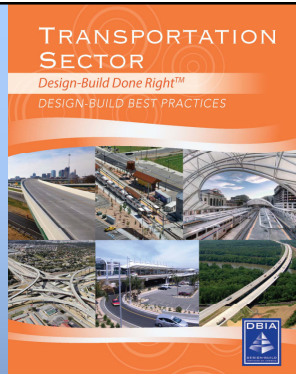
- Associate Design-Build Professional™ (Assoc. DBIA)
 - Emerging industry professionals
 - Seasoned professionals new to design-build
 - Other professionals critical to the pre-award design-build team (i.e., business development professionals, acquisition)
- Design-Build Professional™ (DBIA™)
 - Hands-on design-build experience (pre and post award)

GENERAL CERTIFICATION

- Initial application
- Completion of core courses
- Successful completion of Certification Exam
- Two, three or six years of design-build experience (dependent upon degree)
 - Visit www.dbia.org/certification/eligibility for details
- 18 hours of approved elective credit
- Three references (one must be an Owner)
- Completed application (approved by Certification Board)

2018 Design-Build Award Winner: TCU Prep Alley

QUESTIONS OR COMMENTS?



DESIGN-BUILD DONE RIGHT™ BEST PRACTICES

“Implementing these practices on any type of design-build project increases the probability of a successful project that meets the expectations of all stakeholders.”

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DESIGN-BUILD DONE RIGHT™ BEST PRACTICES

“If these practices are **NOT** implemented, there is an increased probability that the project’s performance will be compromised and that some or all of the stakeholders will be disappointed.”

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